and HTN/DYS treatment rose from 0.6% to 1.3% (+24% pa). In 2001, 29.9% of those aged ≥40 years had a history of HTN and 24.6% of this group had been treated for HTN. Furthermore, 17.7% had a history of DYS of which 7.4% had been treated for this condition. Moreover, 9.7% had a history of concurrent HTN/DYS of which 5.0% had been treated for both conditions.
Conclusion: Incident diagnosis and treatment of DYS and HTN/DYS more than doubled between 1997 and 2001. Treatment of HTN increased, despite a reduction in incident detection. There was a marked trend towards more aggressive treatment of DYS. Nevertheless, the vast majority of patients with HTN and DYS were not being treated for these conditions. Therefore, there is a considerable opportunity to better manage cardiovascular risk by improving the treatment of HTN and DYS.

ORAL CONTRIBUTIONS

858

Prophylaxis and Treatment of Venous Thromboembolism and Hypertension

Tuesday, March 09, 2004, 4:00 p.m.-5:00 p.m.
Morial Convention Center, Room 260

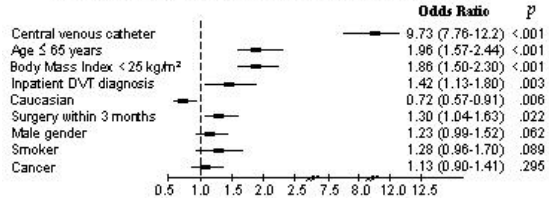
4:00 p.m.

858-1 Risk Factors for and Inadequate Prophylaxis Against Upper Extremity Deep Vein Thrombosis

Hylton V. Joffe, Nils Kucher, Victor F. Tapson, Samuel Z. Goldhaber, The DVT FREE Steering Committee, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, Duke University Medical Center, Durham, NC

Background: Upper extremity deep vein thrombosis (UEDVT) is becoming more common with widespread use of pacemakers, implantable cardioverter-defibrillators, and long-term central venous catheters.
Methods: To improve our knowledge of UEDVT, we describe 592 patients with UEDVT (292 women, 300 men) from DVT FREE, a prospective, United States multicenter registry of 5,451 patients with ultrasound-confirmed deep vein thrombosis (DVT) enrolled at 183 sites over 6 months.
Results: The UEDVT patients were younger (mean age 57.8 ± 17.8 vs. 64.2 ± 16.8 years; p<.001) than the lower extremity DVT patients. Surgery within 3 months of the DVT diagnosis (55% vs. 36%), central venous catheters (55% vs. 10%), and cancer (39% vs. 32%) were more frequent in the UEDVT than lower extremity DVT patients (p<.001). The best independent predictors of UEDVT were indwelling central venous catheters, age ≤ 65 years, and Body Mass Index < 25 kg/m^2 (Figure). Of the 592 UEDVT patients, 402 (68%) were diagnosed as inpatients. The median time from hospitalization to UEDVT diagnosis was 7 days (interquartile range 2-14 days). The most common prophylaxis regimens were subcutaneous unfractionated heparin, warfarin, and low molecular weight heparin, used in 10%, 10%, and 6% of UEDVT patients, respectively. However, only 65 (16%) UEDVT inpatients were receiving prophylaxis at the time of diagnosis.
Conclusion: Most hospitalized patients at risk for UEDVT do not receive effective prophylaxis even though there is opportunity to intervene.

Figure. Multivariate Predictors of Upper Extremity DVT



4:15 p.m.

858-2 Prevention of Flight-Related Thrombosis With Elastic Stockings: The JPA-Study, Final Analysis

Belcaro Giovanni, Maria Rosaria Cesarone, Andrew N. Nicolaides, George Geroulakos, Mark Dugall, Andrea Di Renzo, Sandeep Shah, Art Pulitzer, Lonflit Consortium, London, United Kingdom, San Valentino Vascular Screening Project and Chieti University, Pescara, Italy

The aim of this study was to evaluate deep venous thrombosis (DVT) prophylaxis with specific elastic stockings in long-haul flights (11-13 hours), in high risk subjects. A group of 446 subjects was included; 58 were excluded for several problems including concomitant treatments; 388 were randomised (stockings vs controls) to evaluate prophylaxis with below-knee stockings. An exercise program was used in both groups. Scholl (UK) Flight Socks (14-17 mmHg of pressure at the ankle) were used. DVT was diagnosed with high resolution ultrasound scanning. The femoral, popliteal and tibial veins were scanned before and within 90 minutes after the flights. Out of the included subjects 180 controls and 178 treated subjects completed the study. Drop-outs (30) were due to flight connection problems. Age, sex, risk distributions were comparable in the two groups. In the treatment group (mean age 44.5; SD 12; males 55%) two limited, distal, below-knee DVTs were observed (1.1%). In the control group (mean age 45; SD 11; males 66%) 7 subjects (3.8%) had a DVT and 5 a superficial thombosis (2.7%) for a total of 6.5% of thrombotic events. The difference in DVT incidence is significant (P<0.005; 6 times greater in the control group). Intention to treat analysis counts 29 failures in the control group (17 lost to follow-up + 12 thromboses) out of 197 subjects (14.7%) versus 15 failures (2 DVTs)(7.8%) in the treatment group (P<0.05). The tolerability of the stockings was very good; there were no side effects. Events were asymptomatic in 97% of subjects. In conclusion Scholl Flight Socks are effective in reducing the incidence of DVT in high-risk subjects.

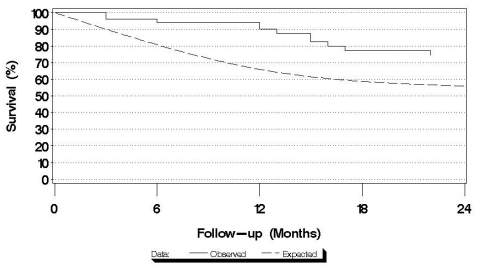
4:30 p.m.

858-3 Subcutaneous Treprostinil Therapy Evokes Both Survival Benefit and Continuous Dose-Dependent Efficacy Improvements in Patients With Pulmonary Arterial Hypertension: A Long-Term European Multicentre Analysis of 112 Patients

Irene Lang, Miguel Gomez-Sanchez, Meinhard Kneussl, Pilar Escribano, Robert Naeije, Jean-Luc Vachiery, Hopital Erasme, Bruxelles, Belgium, Vienna General Hospital, Vienna, Austria

BACKGROUND: Subcutaneous infusion of the prostacyclin analogue, treprostinil (Remodulin®), is an effective treatment for pulmonary arterial hypertension (PAH).Unlike epoprostenol therapy, treprostinil does not require the insertion of a permanent central venous catheter, thus reducing the risk of serious complications. The aim of this multicentre analysis was to investigate whether treprostinil evoked survival benefits and continuous dose-dependent efficacy improvements in patients with PAH.
METHODS: 112 patients (83 female, 29 male) with PAH (New York Heart Association Class I-IV; mean age 47.4±12.5 years) received long-term treprostinil therapy (up to 75 ng/kg/min). During the assessment period, exercise capacity was measured at three-monthly intervals via a six-minute walk test (6MW) and Borg Dyspnea scoring. Changes to NYHA classification status were also monitored.
RESULTS: Survival benefits are shown in Figure One. Mean 6MW scores increased significantly from 323±97 m at baseline to 433± 85m after 24 months. Significant improvements in Borg Dyspnea scores were also observed from a mean baseline value of 5.3±2.6 to 4.0±2.8. NYHA functional class significantly improved from 3.1±0.5 to 2.3±0.7.
CONCLUSIONS: Long-term subcutaneous treprostinil therapy evokes continuous improvements in exercise tolerance and symptoms in patients with PAH. These improvements occur in a dose-dependent manner. Our results also suggest that treprostinil therapy confers survival benefit.

Figure One: Remodulin Survival Curve



4:45 p.m.

858-4 C-Reactive Protein Levels and Race/Ethnicity

Michelle A. Albert, Robert J. Glynn, Julie Buring, Paul M. Ridker, Brigham and Women's Hospital, Boston, MA, Harvard Medical School, Boston, MA

Background:
In the United States, cardiovascular morbidity and mortality rates are higher among Black women than among White women, while rates are lower among Asian women. C-reactive Protein (CRP), a marker of inflammation, is an independent predictor of cardiovascular risk. However, data on CRP among various race/ethnic groups are sparse.
Methods and Results:
The distribution of CRP levels was compared among 24,455 White, 475 Black, 357 Asian and 254 Hispanic women, all of whom are participants in the Women's Health Study (WHS). Median CRP levels were significantly higher among Black women (2.96 mg/L, interquartile range (IQR) = 1.19, 5.86) than their White (2.02 mg/L, IQR = 0.81, 4.37), Hispanic (2.06 mg/L, IQR = 0.88, 4.88), and Asian (1.12 mg/L, IQR = 0.48, 2.25) counterparts. As expected, women taking hormone replacement therapy (HRT) had higher baseline CRP levels than women not taking HRT. No differences in LDL cholesterol or total cholesterol levels were observed between ethnic groups. In multivariate regression models, body mass index (BMI) was a significant
(p < 0.001) predictor of elevated CRP concentrations among all race/ethnic groups, and control for BMI substantially attenuated the differences noted in CRP levels across race/ethnic groups, particularly among Black women. However, control for all measured modifiable risk factors for cardiovascular disease did not entirely explain the CRP differences.
Conclusion: Among these women, the distribution of CRP levels varied among different race/ethnic groups in a manner which parallels observed population based differences in cardiovascular morbidity and mortality rates. Modifiable risk factors did not entirely account for the observed race/ethnic differences noted in CRP levels.